63. (New) The scanner of claim 62 wherein said scanning assembly includes oscillating support structure comprising a scan arm constructed to support said objective lens.

64. (New) The scanner of claim 63 wherein said support structure includes a periscope assembly arranged to provide said optical path including said objective lens.

65. (New) The scanner of claim 62 further comprising focusing system including a tilting mechanism constructed to tilt said examined surface for focusing light passing through said objective lens.

66. The scanner of claim 62 wherein said data collection control and processing unit is constructed to collect optical data over an arcuate scan motion of said objective lens and arranged to time the data collection during the arcuate scan motion.

67. The scanner of claim 66 including a data conversion system arranged to convert said collected data to a raster grid by averaging, for each raster point, the value of data points near the raster point, the values being weighted by their respective distances from the raster point.

68. (New) The scanner of claim 62 wherein said objective lens has a numerical aperture larger than 0.5.

69. (New) The scanner of claim 62 wherein said surface is part of a microscope slide comprising said biological material.

70. (New) The scanner of claim 62 wherein said surface is part of a DNA chip arranged for hybridization of a biological material prior to scanning.

71. (New) The scanner of claim 62 wherein said surface is part of a DNA chip comprising said biological material arranged for DNA sequencing.

72. (New) A wide field of view scanner, comprising:

a scanning assembly including an oscillating support structure constructed to support and displace a micro-objective lens in a scanning motion, said oscillating support structure providing a constant optical path;

a driver constructed to displace said support structure in an oscillating motion;

a position transducer associated with said scanning assembly and constructed to provide a position signal corresponding to a position of said micro-objective lens during said scanning motion;

a light source constructed to emit excitation light directed to an object including biological material;

a optical detector constructed to detect fluorescent light excited in response to said excitation beam from said object;

a translation system constructed to produce movement of the object; and

a data collection control and processing unit constructed and arranged to receive position signal from said position transducer and optical data from said optical detector.

73. (New) The scanner of claim 72 wherein said micro-objective lens is an aspheric lens.

74. (New) The scanner of claim 72 arranged for confocal detection of said fluorescent light.

75. (New) The scanner of claim 72 wherein said wherein said scanning assembly includes a periscope assembly arranged to provide said optical path including said micro-objective lens.

76. (New)The scanner of claim 75 wherein said micro-objective lens receives said fluorescent light stimulated by a spot of said excitation light passing through said micro-objective lens.

77. (New) The scanner of claim 72 constructed to generate an image from said detected fluorescent light.

78. (New) The scanner of claim 72 wherein said driver and said translation system are constructed and arranged to scan said object in form of a microscope slide.

79. (New) The scanner of claim 72 wherein said driver and said translation system are constructed and arranged to scan said object in form of a DNA chip.

80. (New) The scanner of claim 72 wherein said driver and said translation system are constructed and arranged to scan said object in form of a hybridization array.

81. (New) The scanner of claim 72 including an optical merging system constructed to merge at least two light beams into a single beam directed over said optical path extending over said support structure to said micro-objective lens

82. (New) A wide field of view scanner, comprising:

a scanning assembly including an oscillating support structure constructed to support and displace a micro-objective lens in a scanning motion;

a driver constructed to displace said support structure in an oscillating motion;

a position transducer associated with said scanning assembly and constructed to provide a position signal corresponding to a position of said micro-objective lens during said scanning motion;

a light source constructed to emit excitation light directed to an object including biological material;

a optical detector constructed to detect fluorescent light excited in response to said excitation beam from said object; and

a data collection control and processing unit constructed and arranged to receive said position signal from said position transducer and optical data from said optical detector, said data collection control and processing unit providing a set of discrete position data each representing a position of micro-objective lens, and generating a plurality of sample times based, at least in part, on a comparison of the position signal with the position data; and directing sampling said fluorescent light when enabled by the plurality of said sample times.

83. (New) The scanner of claim 82 wherein said scanning assembly includes a rigid periscope assembly arranged to provide said optical path including said micro-objective lens.

84. (New) The scanner of claim 83 wherein said micro-objective lens receives said fluorescent light stimulated by a spot of said excitation light passing through said micro-objective lens.

85. (New) The scanner of claim 82 constructed to generate an image from said detected fluorescent light.

86. (New) The scanner of claim 82 including a translation system constructed to produce movement of the object.

87. (New) The scanner of claim 86 wherein said driver and said translation system are constructed and arranged to scan said object in form of a microscope slide.

88. (New) The scanner of claim 86 wherein said driver and said translation system are constructed and arranged to scan said object in form of a DNA chip.

89. (New) The scanner of claim 86 wherein said driver and said translation system are constructed and arranged to scan said object in form of a hybridization array.

REMARKS

In the Office Action mailed December 2, 2002, the Examiner rejected claim 62 under 35 U.S.C. §102(b) as being anticipated by US Pat. 5,479,252 to Worster et al. Applicant respectfully disagrees with this rejection if applied again to the above claims.

As stated by the Examiner, in U.S. Patent 5,479,252, Worster et al. disclose a system for inspection and analysis of a semiconductor wafer. The system includes a light source (201); a X-Y scanner (207); a turret (223) supporting a plurality of objective lenses (205) wherein a particular objective lens is able to select to insert into the optical path of the system; a stage (224) movable in three directions via a mechanism (216 –